CLAIMS

[c1]   1.   A method in a switch for establishing a connection through the switch, the method comprising:

receiving data at a source port of the switch, the data indicating that the switch is to be part of a new connection to be established through the switch; and

when an existing connection conflicts with the new connection and the received data indicates to preempt,

when the existing connection has a higher priority than the new connection, maintaining the connection; and

when the existing connection does not have a higher priority than the new connection, establishing part of the new connection through the source port and a port previously used by the existing connection.

[c2]   2.   The method of claim 1 including before establishing part of the new connection, terminating the existing connection.

[c3]   3.   The method of claim 1 including before establishing part of the new connection, routing the existing connection through a different port of the switch.

[c4]   4.   The method of claim 1 including determining the priority of a connection based on a priority associated with the data to be sent through the connection.

[c5]   5.   The method of claim 4 wherein when the priorities of the data are the same using a device identifier as a tiebreaker.

[c6]   6.   The method of claim 1 wherein the received data indicates to preempt when a preempt flag is set.

[c7]   7.   The method of claim 1 wherein the data is a start-of-connection frame with a preempt flag being set.

[c8]   8.   The method of claim 7 wherein the start-of-connection frame indicates the priority.

[c9]   9.   The method of claim 1 wherein the switch is Fibre Channel compatible.

[c10]   10.   The method of claim 1 wherein the switch is InfiniBand compatible.

[c11]   11.   The method of claim 1 wherein the switch is an interconnect fabric module.

[c12]   12.   The method of claim 1 wherein the source port is not a port used by the existing connection.

[c13]   13.   The method of claim 1 wherein the existing connection is completely built.

[c14]   14.   A routing device comprising:
a component that receives a communication indicating that the routing
        device is to be part of a new connection to be established that
        conflicts with an existing connection through the routing device; and
a component that maintains the existing connection when the existing
        connection has a higher priority than the new connection and that
        establishes part of the new connection through a port previously

used by the existing connection when the existing connection does not have a higher priority and the new connection indicates to preempt.

[c15]   15.   The routing device of claim 14 including a component that terminates the existing connection when the existing connection does not have a higher priority and the new connection indicates to preempt.

[c16]   16.   The routing device of claim 14 wherein the priority of a connection is based on a priority associated with the communications of the connection.

[c17]   17.   The routing device of claim 16 wherein when the priorities of the communications are the same, using a device identifier as a tiebreaker.

[c18]   18.   The routing device of claim 14 wherein the received communication indicates to preempt when a preempt flag is set.

[c19]   19.   The routing device of claim 14 wherein the routing device is Fibre Channel compatible.

[c20]   20.   The routing device of claim 14 wherein the routing device is InfiniBand compatible.

[c21]   21.   The routing device of claim 14 wherein the routing device is an interconnect fabric module.

[c22]   22.   The routing device of claim 14 wherein the communications is received via a source port is not a port used by the existing connection.

[c23]   23.   The routing device of claim 14 wherein the existing connection is completely built.

[c24]   24.   A method in a routing device for preempting an existing connection with a new connection, the method comprising:

receiving a communication at a source port of the routing device, the communication indicating that the routing device is to be part of the new connection to be established through the routing device; and

when the existing connection conflicts with the new connection and the received communication indicates to preempt, terminating the existing connection and establishing the new connection through the source port and a port previously used by the existing connection.

[c25]   25.   The method of claim 24 including when before establishing part of the new connection, re-establishing the existing connection through a different port of the routing device.

[c26]   26.   The method of claim 24 including maintaining the existing connection when it has a higher priority than the new connection.

[c27]   27.   The method of claim 24 including determining a priority of a connection based on a priority associated with the communication to be sent through the connection.

[c28]   28.   The method of claim 27 wherein when the priorities of the communications are the same using a device identifier as a tiebreaker.

[c29]   29.   The method of claim 24 wherein the received communication indicates to preempt when a preempt flag is set.

[c30]   30.   The method of claim 24 wherein the communication is a start-of-connection frame with a preempt flag being set.

[c31]   31.   The method of claim 24 wherein the routing device is Fibre Channel compatible.

[c32]   32.   The method of claim 24 wherein the routing device is InfiniBand compatible.

[c33]   33.   The method of claim 24 wherein the routing device is an interconnect fabric module.

[c34]   34.   The method of claim 24 wherein the source port is not a port used by the existing connection.

[c35]   35.   The method of claim 24 wherein the existing connection is completely built.

[c36]   36.   A routing device comprising:

means for receiving a communication indicating that the routing device is to be part of a new connection to be established that conflicts with an existing connection through the routing device; and

means for establishing the new connection through a port previously used by the existing connection when the communication indicates to preempt.

[c37]   37.   The routing device of claim 36 including means for terminating the existing connection when the communication indicates to preempt.

[c38]   38.   The routing device of claim 36 including means for maintaining the existing connection when the existing connection has a higher priority than the new connection.

[c39]   39.   The routing device of claim 38 wherein the priority of a connection is based on a priority associated with the communications of the connection.

[c40]   40.   The routing device of claim 39 wherein when the priorities of the communications are the same, using a device identifier as a tiebreaker.

[c41]   41.   The routing device of claim 36 wherein the received communication indicates to preempt when a preempt flag is set.

[c42]   42.   The routing device of claim 36 wherein the routing device is Fibre Channel compatible.

[c43]   43.   The routing device of claim 36 wherein the routing device is InfiniBand compatible.

[c44]   44.   The routing device of claim 36 wherein the routing device is an interconnect fabric module.

[c45]   45.   The routing device of claim 36 wherein the communications is received via a source port is not a port used by the existing connection.

[c46]   46.   The routing device of claim 36 wherein the existing connection is completely built.